

DEC 17 2008

PATENT
Application 10/748,959
Attorney Docket 2003-0009 (1014-053)

AMENDMENTS

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method, comprising:

receiving, at ~~a subscriber interface~~ a subscriber line interface card chipset of an electronic loop provisioning line card, an analog signal from a POTS subscriber loop circuit, the subscriber line interface card chipset adapted to handoff pulse code modulated samples to a digital signal processing chip of the electronic loop provisioning line card, the digital signal processing chip adapted to encode the pulse code modulated samples into a compressed format, the compressed format a low delay code excited linear prediction format, the digital signal processing chip adapted to expand encoded samples from a packet network and delivering samples to the subscriber line interface card chipset, the subscriber line interface card chipset adapted to convert the delivered samples to an analog format, the electronic loop provisioning line card adapted to utilize an enhanced mode, the enhanced mode adapted to use a codec specified in G.722 as a default codec;

automatically determining that customer premises equipment accommodates a Dolby Digital AC-3 signal;

responsive to said determination that customer premises equipment accommodates said Dolby Digital AC-3 signal, automatically substituting a Dolby Digital AC-3 codec for the G.722 codec;

via the enhanced mode, quantizing the analog signal into a plurality of digital samples;

running said Dolby Digital AC-3 codec on a ~~digital~~ digital signal processor installed on ~~the subscriber interface~~ the subscriber line interface electronic loop provisioning line card;

encoding the plurality of digital samples via said Dolby Digital AC-3 codec; and

converting, via conversion instructions running on the digital signal processor, the encoded plurality of digital samples to a plurality of VoATM packets.

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2. (Currently Amended) The method of claim 1, further comprising:
sampling the received analog signal into the plurality of samples, the digital signal processing chip of the subscriber line interface card adapted to encode Voice over ATM and Voice over IP.
3. (Previously Presented) The method of claim 1, further comprising:
digitizing the plurality of samples obtained from the received analog signal.
4. (Previously Presented) The method of claim 1, further comprising:
providing a destination address to each of the plurality of VoATM packets, the line card adapted to append an address header to signals transmitted to a subscriber loop circuit.
5. (Original) The method of claim 1, further comprising:
providing the plurality of VoATM packets to a VoATM packet interface.
6. (Previously Presented) The method of claim 1, further comprising:
via instructions running on the digital signal processor, performing echo cancellation on the encoded plurality of digital samples.
7. (Previously Presented) The method of claim 1, further comprising:
via instructions running on the digital signal processor, performing echo suppression on the encoded plurality of digital samples, the line card adapted to switch automatically between the codec specified in G.722 and a POTS codec based upon capabilities of customer premises equipment.
8. (Previously Presented) The method of claim 1, further comprising:
via instructions running on the digital signal processor, compressing the plurality of digital samples, the line card adapted to switch automatically between the codec specified in G.722 and a POTS codec based upon network capabilities.

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9. (Previously Presented) The method of claim 1, further comprising:
via instructions running on the digital signal processor, modulating the plurality of digital samples, the line card adapted to encode the plurality of digital samples into an ADPCM format.
10. (Previously Presented) The method of claim 1, further comprising:
via instructions running on the digital signal processor, pulse-code-modulating the plurality of digital samples, the line card adapted to encode the plurality of digital samples into an LD-CELP format.
11. (Original) The method of claim 1, further comprising:
via instructions running on the digital signal processor, converting an out-of-band signal associated with the analog signal to an out-of-band packet format.
12. (Original) The method of claim 1, further comprising:
via instructions running on the digital signal processor, converting an out-of-band DTMF signal associated with the analog signal to an out-of-band packet format.
13. (Original) The method of claim 1, further comprising:
via instructions running on the digital signal processor, converting an out-of-band fax signal associated with the analog signal to an out-of-band packet format.
14. (Original) The method of claim 1, further comprising:
via instructions running on the digital signal processor, converting a voice-band modem signal associated with the analog signal to an out-of-band packet format.
15. (Original) The method of claim 1, further comprising:
via instructions running on the digital signal processor, suppressing comfort noise samples associated with the analog signal.

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16. (Currently Amended) The method of claim 1, wherein the ~~subscriber interface~~electronic loop provisioning line card is adapted to be installed at a central office to simultaneously support legacy CPE and electronic loop provisioning, the ~~subscriber interface~~electronic loop provisioning line card adapted to receive a signal indicative of a highest possible bearer bandwidth and codec that a network is capable of supporting, said Dolby Digital AC-3 codec selected based upon said signal indicative of said highest possible bearer bandwidth and codec.
17. (Currently Amended) The method of claim 1, wherein the ~~subscriber interface~~electronic loop provisioning line card is adapted to be installed in a central office switch, the ~~subscriber interface~~electronic loop provisioning line card adapted to interwork with ISDN to negotiate bearer capabilities between calling and called parties.
18. (Currently Amended) The method of claim 1, wherein the ~~subscriber interface~~electronic loop provisioning line card is adapted to be installed in a remote terminal of a central office switch, the ~~subscriber interface~~electronic loop provisioning line card adapted to receive a response to a query of a server, the query to the server to determine if a terminating subscriber is an enhanced services subscriber.
19. (Currently Amended) ~~A subscriber interface~~An electronic loop provisioning line card comprising:
a POTS subscriber loop circuit interface adapted to receive an analog signal from a POTS subscriber loop circuit and quantize the analog signal into a plurality of digital samples, the line card adapted to receive a signal that customer premises equipment accommodates a Dolby Digital AC-3 signal, the line card adapted to utilize an enhanced mode, the enhanced mode adapted to use a codec specified in G.722, the subscriber line interface card chipset adapted to handoff pulse code modulated samples to a digital signal processing chip of the electronic loop provisioning line card, the digital signal processing chip adapted to encode the pulse code modulated samples into a compressed format, the

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compressed format a low delay code excited linear prediction format, the digital signal processing chip adapted to expand encoded samples from a packet network and delivering samples to the subscriber line interface card chipset, the subscriber line interface card chipset adapted to convert the delivered samples to an analog format, the electronic loop provisioning line card adapted to automatically substitute a Dolby Digital AC-3 codec for the G.722 codec responsive to said signal;

the Dolby Digital AC-3 codec stored on the ~~subscriber interface~~ electronic loop provisioning line card, the Dolby Digital AC-3 codec adapted to run on a digital signal processor coupled to the POTS subscriber loop circuit interface, the Dolby Digital AC-3 codec adapted to encode the plurality of digital samples; and

conversion instructions stored on the ~~subscriber interface~~ electronic loop provisioning line card, adapted to run on the digital signal processor, and adapted to convert the encoded plurality of digital samples to a plurality of VoATM packets.

20. (Currently Amended) A machine-readable medium storing instructions for activities comprising:

receiving, at a ~~subscriber interface~~ an electronic loop provisioning line card, an analog signal from a POTS subscriber loop circuit, the line card adapted to utilize an enhanced mode, the enhanced mode adapted to use a codec specified in G.722 the subscriber line interface card chipset adapted to handoff pulse code modulated samples to a digital signal processing chip of the electronic loop provisioning line card, the digital signal processing chip adapted to encode the pulse code modulated samples into a compressed format, the compressed format a low delay code excited linear prediction format, the digital signal processing chip adapted to expand encoded samples from a packet network and delivering samples to the subscriber line interface card chipset, the subscriber line interface card chipset adapted to convert the delivered samples to an analog format;

automatically determining that customer premises equipment accommodates a Dolby Digital AC-3 signal;

responsive to said determination that customer premises equipment accommodates

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said Dolby Digital AC-3 signal, automatically substituting a Dolby Digital AC-3 codec for the G.722 codec;

via the enhanced mode, quantizing the analog signal into a plurality of digital samples;

running said Dolby Digital AC-3 codec on a ~~digital~~ signal processor installed on the ~~subscriber interface~~ electronic loop provisioning line card;

encoding the plurality of digital samples via said Dolby Digital AC-3 codec; and

converting, via conversion instructions running on the digital signal processor, the encoded plurality of digital samples to a plurality of VoATM packets.